



**MARSAND, INC.**

Matthew A. Sanderford, Jr., P.E.

## **ENGINEERING STATEMENT**

**In support of a**

**Minor Amendment to Pending**

**Application for Construction Permit (CP)**

**BPCDT-20110509ACB**

**KTSM-TV El Paso, TX**

**463 kW ERP      577 m HAAT**

### **PURPOSE**

MARSAND, INC. has been retained by Comcorp of El Paso License Corp. (the "Licensee") Licensee of KTSM digital Channel 9 of El Paso, TX (the "Station"), to prepare this engineering statement in support of a Minor Amendment to Pending Application for Construction Permit (CP) BPCDT-20110509ACB for digital service on Channel 16. This instant proposal seeks to amend the requested maximum effective radiated power (ERP) from 250 kW to 463 kW for digital service on Channel 16 at 577 m height above average terrain (HAAT) using a directional antenna.

### **HISTORY**

A request for rulemaking was made for CH 16 digital, and BPRM-20101129APK was granted. The Application for CP, BPCDT-20110509ACB, specifying 250 kW ERP has been accepted for filing.

### **DISCUSSION**

The Licensee proposes to use an existing, top mount, directional antenna. The antenna manufacturer's specifications can be found in the Appendix. The Licensee also proposes to use a type accepted, digital transmitter and mask filter for digital service.

The requested 463kW ERP exceeds the maximum height vs. power limits as set by the table in section 73.622 (f)(6) of the Rules. However, a waiver of the rules is requested as allowed under section 73.622 (f) (5) where the technical criteria in section 73.623 (c) is met (shown below) and in order to meet the same coverage area as the largest station within the market. KFOX-TV (BLC DT-20051103AAE) has digital service on CH15 with 1,000 kW at 602 m HAAT located at an adjacent site to KTSM.

An interference study using the TV Process 2010 analysis program by Meintel, Sgrignoli &Wallace (a software program which is familiar to the Commission that is written in Fortran and run on a Sun Microsystems workstation and employs the methods outlined in the OET 69 Bulletin), confirms that the proposed facility would not exceed 0.5% new interference to any other station (using the existing, post transition database). The study results are listed in the Appendix. A summary of the interference study is included below in **Table 1**.

Stations Potentially Affected by Proposal							
Channel	Call Letters	City/State	Distance (km)	Status	Application Reference Number	Interference	
						Existing	New
15	KFOX-TV	EI PASO TX	1.2	LIC	BLC DT -20051103AAE	Proposal causes no Interference	
17	KVIA-DT	EI PASO TX	0	APP	BPRM -20110120ABW	Proposal causes no Interference	

**Table 1**

The proposal is clear of any FCC monitoring stations, quiet zones, and Table Mountain. It is also further than 3.2 km from the nearest AM station. However, it is located 4.4 km from Mexico which places it within the Mexican Border Zone. Coordination with the Mexican government is requested.

### **RF Radiation Exposure Statement**

The requirements or Section 73.1307(b) of the FCC Rules regarding human exposure to radio frequency (RF) energy are met under this instant application for the post-transition digital television facility proposed herein.

The proposed facility utilizes the an existing, multi-use tower structure (ASR 1202400). The site is restricted access. Site security is maintained by the Texas Parks and Wildlife. The station agrees to maintain full compliance with the safety precautions to workers on the tower

(controlled) and the general public (uncontrolled) by reducing or removing radiated power during the time of construction or maintenance on or near the antenna. The station also certifies that it, in coordination with other users of the site, will reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from Radiofrequency Electromagnetic exposure in excess of FCC guidelines.

**Table 2** shows the calculations of RF level 2m above ground level for the General Public / Uncontrolled (GP/U) would not exceed 5% of the Maximum Permissible Exposure (MPE) limit. The calculations are shown in the Appendix. The proposed facility is therefore a negligible contributor to the RF environment at all ground level locations and is excluded from the routine environmental evaluation pursuant to Section 1.1307(b) of the FCC Rules.

Call Letters	Channel / Frequency	Distance from RCAGL to 2 m AGL	Worst Case Downward Radiation (Relative Field)	Calculated Power Density ( $\mu\text{W}/\text{cm}^2$ )	GP/U MPE ( $\mu\text{W}/\text{cm}^2$ )	Percentage of GP/U MPE
KTSM-TV	CH16 482 – 488MHz	109	0.1	13.02	0.323	4%

**Table 2**

## **CONCLUSION**

It is respectfully requested that the Commission coordinate with the proposed facility with the Mexican government and grant this request for CP for the proposed transmission facility.

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**DECLARATION**

Matthew A. Sanderford, Jr., P.E., declares and states that he is a graduate Electrical Engineer with a Bachelor of Science Degree in Electrical Engineering from the University of Texas at El Paso, a Licensed Professional Engineer in the State of Texas, and his qualifications are known to the Federal Communications Commission, and that he is President of MARSAND, INC., a Registered Professional Engineering firm in the State of Texas, and that firm has been retained by the Licensee, to perform the engineering support as contained in this report.

All facts contained herein are true of his own knowledge except where stated to be on information or belief provided by the Licensee, and as to those facts, he believes them to be true.

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I declare under penalty of perjury that the foregoing is true and correct.



\_\_\_\_\_  
Matthew A. Sanderford, Jr., P.E.

President - MARSAND, INC.

Executed this 3<sup>rd</sup> day of June, 2011

State of Texas

## **Appendix**

**DTV EFFECTIVE RADIATED POWER CALCULATIONS**

Call letters: **KTSM** Date: **6/3/2011**  
 Location: **El Paso, TX**  
 Channel: **16**  
 Frequency: **485 MHz Mid-Band**  
 Antenna: **RFS RD24OM-1618M6T60**

Transmitter Power Output (TPO): **14.468 kW avg.** **11.60 dBk**  
 Filter Type: Loss: **(inc)** **dB**  
 Transmission Line: RFS HCA800-50J  
 Loss per 100 ft.: **-0.072 dB**  
 Line Length: **400 ft.**  
 Total Line Loss: **-0.288 dB** **-0.29 dB**

Antenna Input Power: **13.54 kW** **11.32 dBk**

Efficiency: **93.584 %**

Elevation Antenna Gain -

*Horizontal -*

Vert. Polarization - Gain **dB**

Hor. Polarization - 9.89 Gain **9.95 dB**

Maximum -

Vert. Polarization - Gain **dB**

Hor. Polarization - 20.14 Gain **13.04 dB**

Azimuthal Antenna Gain -

Vert. Polarization - Gain **dB**

Hor. Polarization - 1.70 Gain **2.30 dB**

***Horizontal ERP -***

***Vertical Polarization:*** ***kW*** ***dBk***

***Horizontal Polarization:*** ***227.30 kW*** ***23.57 dBk***

**Maximum ERP -**

**Vertical Polarization:** **kW** **dBk**

**Horizontal Polarization:** **463.03 kW** **26.66 dBk**

**Radio Frequency Radiation Human Exposure Calculations**

Call letters: **KTSM-DT**  
City of License: **El Paso, TX**  
Channel: **16A**

Date: **6/3/2011**

Reference:

**FCC Rules Section 73.1307(b) & 73.1310**  
**OET Bulletin No. 65 Edition 97-01, August, 1997**  
**OET Bulletin No. 56**

**DTV Average Power**

**463,000 W ERP**

**Typical relative field factor** in the downward direction: **0.10**  
(conservative estimate)

Antenna Radiation Center Above Ground Level (RCAGL): **111.0 m**

**Occupational/Controlled (O/C) Exposure**

Highest Calculated Power Density: **12.55  $\mu\text{W}/\text{cm}^2$**

Maximum Permissible Exposure (MPE) for this Channel -

Frequency (middle of the band): **485 MHz**  
MPE O/C Limit (6 minutes average): **1.6  $\text{mW}/\text{cm}^2$**   
Percentage of MPE O/C Limit: **0.78 %**

**General Population/Uncontrolled (GP/U) Exposure**

Typical height of a person's head standing at ground level: **2 m**  
Distance from head height to antenna radiation center: **109.0 m**  
Highest Calculated Power Density: **13.02  $\mu\text{W}/\text{cm}^2$**

Maximum Permissible Exposure (MPE) for this Channel -

Frequency (middle of the band): **485 MHz**  
MPE GP/U Limit (30 minutes average): **0.323  $\text{mW}/\text{cm}^2$**   
Percentage of MPE GP/U Limit: **4.0 %**

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The Clear Choice™

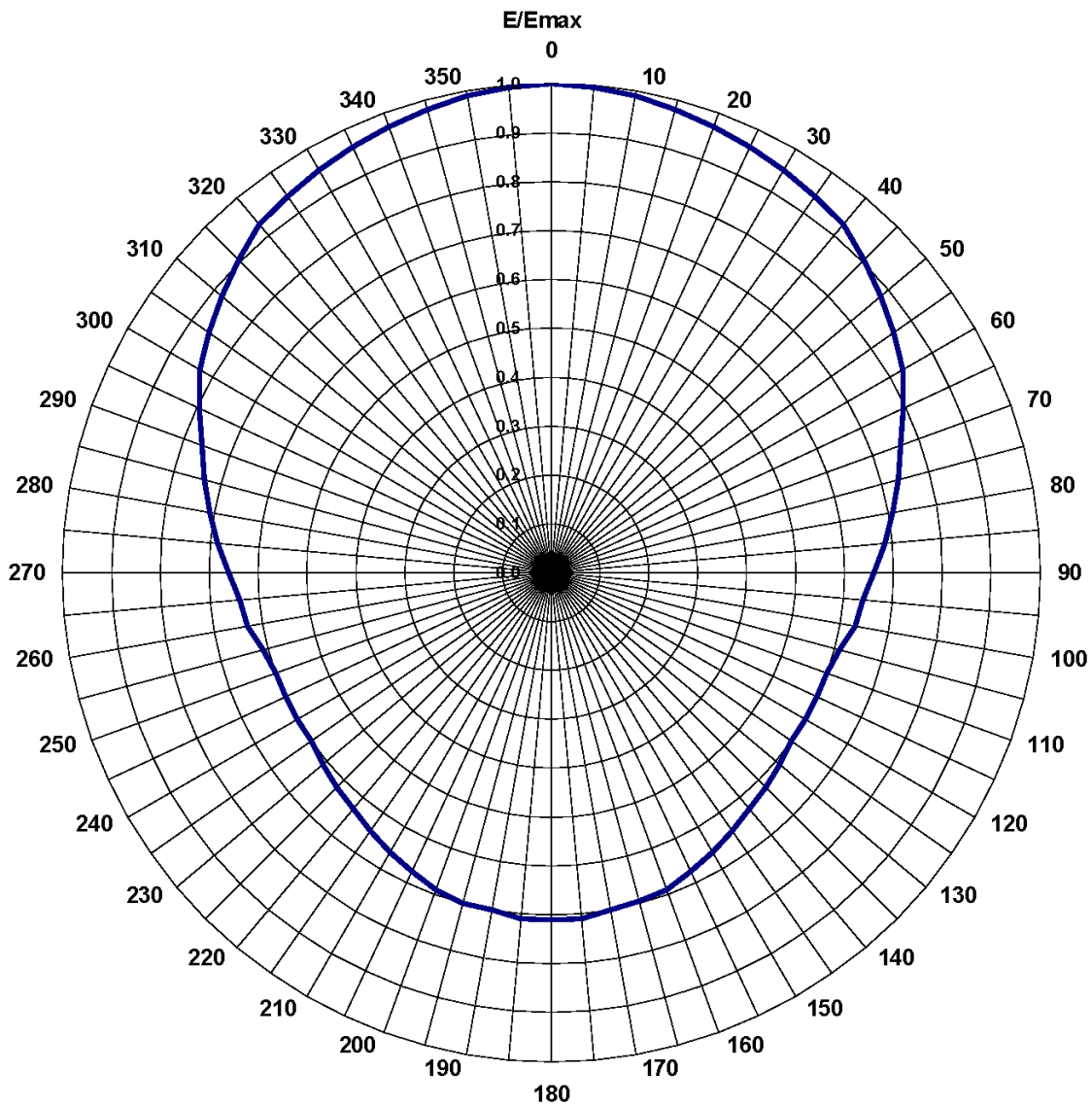


## AZIMUTH PATTERN

TYPE:	RFS - OM	
	Numeric	dB
Directivity:	<u>1.70</u>	<u>2.3</u>
Polarization:	Horizontal	
Channel:	16, 17, 18	
Location:	El Paso, TX	

Model:	RD24OM-1618M6T60
INQUIRY #:	2043
QUOTE #:	1048
ATS Job#:	2419 Rev. C

Note: Pattern shape and directivity may vary with channel and mounting configuration.



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www.rfsworld.com



**TABULATED DATA FOR AZIMUTH PATTERN**

TYPE: RFS - OM

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ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB
0	1.000	0.00	94	0.640	-3.88	188	0.700	-3.10	282	0.720	-2.85
2	1.000	0.00	96	0.640	-3.88	190	0.700	-3.10	284	0.730	-2.73
4	1.000	0.00	98	0.630	-4.01	192	0.700	-3.10	286	0.740	-2.62
6	0.990	-0.09	100	0.630	-4.01	194	0.700	-3.10	288	0.750	-2.50
8	0.990	-0.09	102	0.620	-4.15	196	0.690	-3.22	290	0.760	-2.38
10	0.990	-0.09	104	0.610	-4.29	198	0.690	-3.22	292	0.780	-2.16
12	0.980	-0.18	106	0.610	-4.29	200	0.690	-3.22	294	0.790	-2.05
14	0.980	-0.18	108	0.610	-4.29	202	0.680	-3.35	296	0.800	-1.94
16	0.980	-0.18	110	0.600	-4.44	204	0.680	-3.35	298	0.810	-1.83
18	0.970	-0.26	112	0.600	-4.44	206	0.670	-3.48	300	0.830	-1.62
20	0.970	-0.26	114	0.600	-4.44	208	0.670	-3.48	302	0.840	-1.51
22	0.970	-0.26	116	0.600	-4.44	210	0.660	-3.61	304	0.850	-1.41
24	0.960	-0.35	118	0.600	-4.44	212	0.660	-3.61	306	0.860	-1.31
26	0.960	-0.35	120	0.600	-4.44	214	0.650	-3.74	308	0.870	-1.21
28	0.960	-0.35	122	0.600	-4.44	216	0.640	-3.88	310	0.880	-1.11
30	0.950	-0.45	124	0.600	-4.44	218	0.640	-3.88	312	0.890	-1.01
32	0.950	-0.45	126	0.600	-4.44	220	0.630	-4.01	314	0.900	-0.92
34	0.940	-0.54	128	0.610	-4.29	222	0.630	-4.01	316	0.910	-0.82
36	0.940	-0.54	130	0.610	-4.29	224	0.620	-4.15	318	0.920	-0.72
38	0.930	-0.63	132	0.610	-4.29	226	0.620	-4.15	320	0.930	-0.63
40	0.930	-0.63	134	0.620	-4.15	228	0.610	-4.29	322	0.930	-0.63
42	0.920	-0.72	136	0.620	-4.15	230	0.610	-4.29	324	0.940	-0.54
44	0.910	-0.82	138	0.630	-4.01	232	0.610	-4.29	326	0.940	-0.54
46	0.900	-0.92	140	0.630	-4.01	234	0.600	-4.44	328	0.950	-0.45
48	0.890	-1.01	142	0.640	-3.88	236	0.600	-4.44	330	0.950	-0.45
50	0.880	-1.11	144	0.640	-3.88	238	0.600	-4.44	332	0.960	-0.35
52	0.870	-1.21	146	0.650	-3.74	240	0.600	-4.44	334	0.960	-0.35
54	0.860	-1.31	148	0.660	-3.61	242	0.600	-4.44	336	0.960	-0.35
56	0.850	-1.41	150	0.660	-3.61	244	0.600	-4.44	338	0.970	-0.26
58	0.840	-1.51	152	0.670	-3.48	246	0.600	-4.44	340	0.970	-0.26
60	0.830	-1.62	154	0.670	-3.48	248	0.600	-4.44	342	0.970	-0.26
62	0.810	-1.83	156	0.680	-3.35	250	0.600	-4.44	344	0.980	-0.18
64	0.800	-1.94	158	0.680	-3.35	252	0.610	-4.29	346	0.980	-0.18
66	0.790	-2.05	160	0.690	-3.22	254	0.610	-4.29	348	0.980	-0.18
68	0.780	-2.16	162	0.690	-3.22	256	0.610	-4.29	350	0.990	-0.09
70	0.760	-2.38	164	0.690	-3.22	258	0.620	-4.15	352	0.990	-0.09
72	0.750	-2.50	166	0.700	-3.10	260	0.630	-4.01	354	0.990	-0.09
74	0.740	-2.62	168	0.700	-3.10	262	0.630	-4.01	356	1.000	0.00
76	0.730	-2.73	170	0.700	-3.10	264	0.640	-3.88	358	1.000	0.00
78	0.720	-2.85	172	0.700	-3.10	266	0.640	-3.88	360	1.000	0.00
80	0.710	-2.97	174	0.710	-2.97	268	0.650	-3.74			
82	0.700	-3.10	176	0.710	-2.97	270	0.660	-3.61			
84	0.690	-3.22	178	0.710	-2.97	272	0.670	-3.48			
86	0.680	-3.35	180	0.710	-2.97	274	0.680	-3.35			
88	0.670	-3.48	182	0.710	-2.97	276	0.690	-3.22			
90	0.660	-3.61	184	0.710	-2.97	278	0.700	-3.10			
92	0.650	-3.74	186	0.710	-2.97	280	0.710	-2.97			

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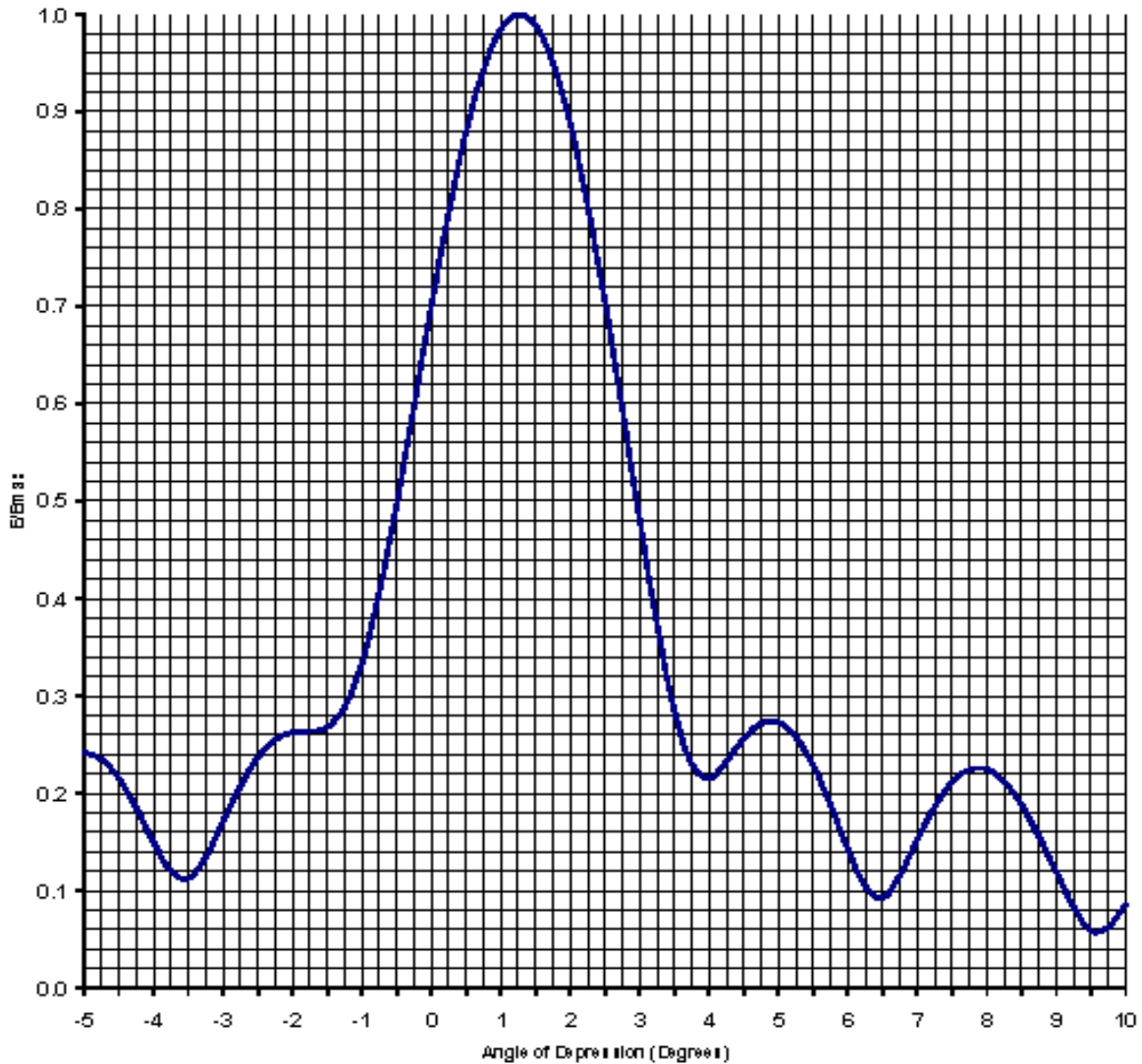
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### ELEVATION PATTERN

TYPE:	RD24T60	
Directivity:	Numeric	dBd
Main Lobe:	<u>20.2</u>	<u>13.04</u>
Horizontal:	<u>9.9</u>	<u>9.95</u>
Beam Tilt:	1.25	
3dB Beamwidth:		
Polarization:	Horizontal	
Channel:	16, 17, 18	
Location:	El Paso, TX	

Model:	RD240M-1618MST60
INQUIRY #:	2043
QUOTE #:	1043
ATS Job#:	2419 Rev. C



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# TABULATED DATA FOR ELEVATION PATTERN

TYPE: RD24T60

-5 to 10 in 0.25 increments

10 to 90 in 0.50 increments

ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB
-5.00	0.242	-12.32	6.75	0.116	-18.72	27.00	0.031	-30.14	50.50	0.015	-36.31	74.00	0.002	-54.42
-4.75	0.235	-12.57	7.00	0.152	-16.36	27.50	0.048	-26.30	51.00	0.011	-39.33	74.50	0.001	-60.92
-4.50	0.215	-13.34	7.25	0.186	-14.61	28.00	0.058	-24.81	51.50	0.011	-39.49	75.00	0.001	-66.02
-4.25	0.185	-14.67	7.50	0.211	-13.50	28.50	0.056	-25.08	52.00	0.013	-37.92	75.50	0.002	-63.15
-4.00	0.149	-16.52	7.75	0.224	-12.99	29.00	0.045	-27.03	52.50	0.014	-36.95	76.00	0.004	-47.74
-3.75	0.120	-18.42	8.00	0.225	-12.98	29.50	0.029	-30.66	53.00	0.014	-36.95	76.50	0.006	-44.29
-3.50	0.112	-18.99	8.25	0.212	-13.48	30.00	0.023	-32.88	53.50	0.013	-37.92	77.00	0.008	-41.83
-3.25	0.135	-17.42	8.50	0.189	-14.49	30.50	0.031	-30.20	54.00	0.010	-39.66	77.50	0.010	-39.91
-3.00	0.171	-15.35	8.75	0.156	-16.12	31.00	0.040	-28.05	54.50	0.008	-41.94	78.00	0.012	-38.49
-2.75	0.208	-13.66	9.00	0.119	-18.46	31.50	0.042	-27.49	55.00	0.006	-44.44	78.50	0.014	-37.39
-2.50	0.237	-12.51	9.25	0.083	-21.61	32.00	0.040	-28.02	55.50	0.004	-47.96	79.00	0.015	-36.54
-2.25	0.255	-11.88	9.50	0.058	-24.69	32.50	0.038	-28.38	56.00	0.001	-59.17	79.50	0.016	-35.92
-2.00	0.263	-11.62	9.75	0.063	-24.06	33.00	0.044	-27.17	56.50	0.003	-49.37	80.00	0.017	-35.49
-1.75	0.264	-11.58	10.00	0.086	-21.34	33.50	0.055	-25.26	57.00	0.010	-40.26	80.50	0.017	-35.19
-1.50	0.268	-11.46	10.50	0.130	-17.71	34.00	0.064	-23.86	57.50	0.018	-35.09	81.00	0.018	-35.04
-1.25	0.288	-10.80	11.00	0.144	-16.83	34.50	0.068	-23.35	58.00	0.027	-31.47	81.50	0.018	-35.04
-1.00	0.334	-9.54	11.50	0.125	-18.06	35.00	0.065	-23.80	58.50	0.036	-28.80	82.00	0.018	-35.14
-0.75	0.406	-7.83	12.00	0.085	-21.41	35.50	0.055	-25.27	59.00	0.046	-26.82	82.50	0.017	-35.34
-0.50	0.497	-6.08	12.50	0.051	-25.88	36.00	0.040	-27.94	59.50	0.054	-25.40	83.00	0.017	-35.60
-0.25	0.598	-4.47	13.00	0.058	-24.75	36.50	0.024	-32.36	60.00	0.060	-24.42	83.50	0.016	-35.92
0.00	0.700	-3.09	13.50	0.077	-22.26	37.00	0.010	-40.18	60.50	0.064	-23.84	84.00	0.015	-36.36
0.25	0.796	-1.98	14.00	0.081	-21.80	37.50	0.001	-64.44	61.00	0.066	-23.64	84.50	0.014	-36.83
0.50	0.879	-1.12	14.50	0.073	-22.75	38.00	0.006	-44.15	61.50	0.065	-23.77	85.00	0.014	-37.39
0.75	0.943	-0.51	15.00	0.069	-23.19	38.50	0.008	-42.16	62.00	0.061	-24.25	85.50	0.013	-37.92
1.00	0.985	-0.14	15.50	0.082	-21.69	39.00	0.009	-40.92	62.50	0.056	-25.07	86.00	0.012	-38.56
1.25	1.000	0.00	16.00	0.099	-20.05	39.50	0.013	-37.59	63.00	0.049	-26.23	86.50	0.011	-39.25
1.50	0.989	-0.10	16.50	0.106	-19.49	40.00	0.019	-34.66	63.50	0.041	-27.74	87.00	0.010	-39.91
1.75	0.951	-0.44	17.00	0.097	-20.29	40.50	0.022	-33.19	64.00	0.033	-29.55	87.50	0.009	-40.72
2.00	0.889	-1.03	17.50	0.073	-22.70	41.00	0.022	-33.23	64.50	0.027	-31.47	88.00	0.008	-41.51
2.25	0.805	-1.89	18.00	0.043	-27.39	41.50	0.018	-34.89	65.00	0.022	-33.00	88.50	0.008	-42.27
2.50	0.705	-3.03	18.50	0.013	-37.52	42.00	0.013	-37.99	65.50	0.021	-33.56	89.00	0.007	-43.22
2.75	0.595	-4.51	19.00	0.008	-42.05	42.50	0.013	-37.92	66.00	0.022	-33.23	89.50	0.006	-44.15
3.00	0.482	-6.35	19.50	0.018	-35.14	43.00	0.021	-33.72	66.50	0.023	-32.62	90.00	0.000	0.00
3.25	0.375	-8.53	20.00	0.018	-35.04	43.50	0.030	-30.60	67.00	0.025	-32.15			
3.50	0.285	-10.90	20.50	0.019	-34.29	44.00	0.036	-28.90	67.50	0.025	-32.01			
3.75	0.230	-12.77	21.00	0.029	-30.78	44.50	0.038	-28.40	68.00	0.025	-32.22			
4.00	0.216	-13.33	21.50	0.038	-28.47	45.00	0.035	-29.02	68.50	0.023	-32.77			
4.25	0.233	-12.67	22.00	0.039	-28.27	45.50	0.029	-30.84	69.00	0.021	-33.72			
4.50	0.256	-11.83	22.50	0.030	-30.37	46.00	0.020	-34.15	69.50	0.018	-34.99			
4.75	0.272	-11.32	23.00	0.020	-34.15	46.50	0.012	-38.42	70.00	0.015	-36.71			
5.00	0.273	-11.28	23.50	0.028	-31.15	47.00	0.014	-36.95	70.50	0.012	-38.79			
5.25	0.258	-11.78	24.00	0.046	-26.69	47.50	0.022	-33.19	71.00	0.009	-41.31			
5.50	0.229	-12.82	24.50	0.060	-24.48	48.00	0.028	-30.96	71.50	0.006	-44.15			
5.75	0.188	-14.53	25.00	0.062	-24.11	48.50	0.032	-30.03	72.00	0.005	-46.94			
6.00	0.143	-16.92	25.50	0.053	-25.55	49.00	0.031	-30.17	72.50	0.004	-49.12			
6.25	0.105	-19.62	26.00	0.034	-29.27	49.50	0.027	-31.24	73.00	0.003	-50.46			
6.50	0.093	-20.67	26.50	0.020	-34.20	50.00	0.022	-33.31	73.50	0.003	-51.70			

Radio Frequency Systems, Inc.  
200 Pondview Drive Meriden, CT 06450  
Tel: +1 203-630-3311 Fax: +1 203-821-3852  
www.rfcsystems.com

Percent allowed new interference: 0.500  
Percent allowed new interference to non Class A LPTV: 2.000  
TW Census data selected 2000  
Data Base Selected  
/space/software/cdbb/pt\_tvdb.sff

WARNING WARNING WARNING

The following list of station records has been excluded from the analysis due to the fact that they have the same state, city and channel as the proposed station - This could cause the program to not find a potential fail situation

You can force the program to include these records by setting the state of the proposed record to ZZ and re-running the analysis

KTSM-TV 16 EL PASO TX BPCDT 20110509ACB

TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 06-03-2011 Time: 16:15:09

Record Selected for Analysis

KTSM-TV USERRECORD-01 EL PASO TX US  
Channel 16 ERP 463. kW HAAT 577. m RCAMSL 01819 m  
Latitude 031-48-19 Longitude 0106-28-59  
Status APP Zone 2 Border Site number: 01  
Dir Antenna Make usr Model ktsm-rfs Beam tilt N Ref Azimuth 180.  
Last update Cutoff date Docket  
Comments  
Applicant

Cell Size for Service Analysis 2.0 km/side

Distance Increments for Longley-Rice Analysis 1.00 km

Facility (site # 01) does not meet maximum height/power limits  
Channel 16 ERP = 463.00 HAAT = 577.

Site number	1		
Azimuth	ERP	HAAT	41.0 dBu F(50,90)
(Deg)	(kW)	(m)	(km)
0.0	233.398	276.8	81.2
45.0	177.977	620.2	105.8
90.0	201.683	621.9	107.0

**Matthew A. Sanderford, Jr., P.E.**

---

135.0	379.209	693.1	115.8
180.0	463.000	643.5	115.4
225.0	379.209	551.7	109.0
270.0	201.683	632.0	107.4
315.0	177.977	580.6	104.0

Evaluation toward Class A Stations from site # 01

No Spacing violations or contour overlap  
to Class A stations from site # 01

Class A Evaluation Complete

SPACING VIOLATION FOUND BETWEEN STATION

KTSM-TV 16 EL PASO TX USERRECORD01 Site # 01

and station

SHORT TO: KTSM-TV 16 EL PASO TX DTVPLN DTVP0567  
31 -48-18 106 -28-59  
Req. separation 223.7 Actual separation 0.0 Short 223.7 km

SHORT TO: KTSM-DR 16 EL PASO TX BPRM 20101129APK  
031-48-19 0106-28-59  
Req. separation 223.7 Actual separation 0.0 Short 223.7 km

LANDMOBILE SPACING VIOLATIONS FOUND

NONE from Site # 01

Checks to Site Number 01

Proposed facility OK to FCC Monitoring Stations

Proposed facility OK toward West Virginia quiet zone

Proposed facility OK toward Table Mountain

Proposed facility is beyond the Canadian coordination distance

Proposed facility is within the Mexican coordination distance

Distance to border = 4.4km

Proposed station is OK toward AM broadcast stations

\*\*\*\*\*

Start of Interference Analysis

Channel	Proposed Station Call	City/State	ARN
16	KTSM-TV	EL PASO TX	USERRECORD01

Stations Potentially Affected by Proposed Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
15	KFOX-TV	EL PASO TX	1.2	LIC	BLCDT	20051103AAE
17	KVIA-DR	EL PASO TX	0.0	APP	BPRM	20110120ABW

%%%

Analysis of Interference to Affected Station 1

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
15	KFOX-TV	EL PASO TX	BLCDT	-20051103AAE

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
16	KTSM-TV	EL PASO TX	1.3	PLN	DTVPLN	-DTVP0567
16	KTSM-TV	EL PASO TX	1.2	APP	USERRECORD-01	

Proposal causes no interference

#####

Analysis of Interference to Affected Station 2

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
17	KVIA-DR	EL PASO TX	BPRM	-20110120ABW

Stations Potentially Affecting This Station

Matthew A. Sanderford, Jr., P.E.

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
16	KTSM-TV	EL PASO TX	0.0	PLN	DTVPLN	-DTVP0567
17	KAZQ	ALBUQUERQUE NM	378.9	LIC	BLEDT	-20051012ACK
18	KDBC-TV	EL PASO TX	1.0	LIC	BLCDT	-20090713ABW
16	KTSM-TV	EL PASO TX	0.0	APP	USERRECORD-01	

Proposal causes no interference

#####

## Analysis of Interference to Affected Station 3

## Analysis of current record

Channel	Call	City/State	Application	Ref. No.
16	KTSM-TV	EL PASO TX	USERRECORD-01	

## Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
15	KFOX-TV	EL PASO TX	1.2	LIC	BLCDT	-20051103AAE
17	KVIA-DR	EL PASO TX	0.0	APP	BPRM	-20110120ABW

Total scenarios = 1

Result key: 1  
 Scenario 1 Affected station 3  
 Before Analysis

Results for: 16A TX EL PASO USERRECORD01 APP  
 HAAT 577.0 m, ATV ERP 463.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	857321	38534.1
not affected by terrain losses	853057	36574.5
lost to NTSC IX	0	0.0
lost to additional IX by ATV	79	104.2
lost to ATV IX only	79	104.2
lost to all IX	79	104.2

Potential Interfering Stations Included in above Scenario 1

15A TX EL PASO BLCDT 20051103AAE LIC

#####

FINISHED FINISHED FINISHED FINISHED FINISHED FINISHED

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Federal Communications Commission Washington, D.C. 20554	Approved by OMB 3060-0027 (June 2010)	FOR FCC USE ONLY
<b>FCC 301</b>		
<b>APPLICATION FOR CONSTRUCTION PERMIT FOR COMMERCIAL BROADCAST STATION</b>		FOR COMMISSION USE ONLY FILE NO.
Read INSTRUCTIONS Before Filling Out Form		-

**Section I - General Information**

1.	Legal Name of the Applicant COMCORP OF EL PASO LICENSE CORP.		
	Mailing Address 700 ST. JOHNS STREET SUITE 300		
	City LAFAYETTE	State or Country (if foreign address) LA	ZIP Code 70505 -
	Telephone Number (include area code) 3372371142	E-Mail Address (if available)	
	FCC Registration Number:	Call Sign KTSM-TV	Facility ID Number 67760
2.	Contact Representative (if other than Applicant) KEVIN P. LATEK		Firm or Company Name DOW LOHNES PLLC
	Mailing Address 1200 NEW HAMPSHIRE AVE. NW SUITE 800		
	City WASHINGTON	State or Country (if foreign address) DC	ZIP Code 20036 -
	Telephone Number (include area code) 2027762000	E-Mail Address (if available) KLATEK@DOWLOHNES.COM	
3.	If this application has been submitted without a fee, indicate reason for fee exemption (see 47 C.F.R. Section 1.1114): <input type="radio"/> Governmental Entity <input checked="" type="radio"/> Other AMENDMENT <input type="radio"/> N/A (Fee Required)		
4.	<b>Application Purpose</b> <input type="radio"/> New station <input type="radio"/> Major Modification of construction permit <input type="radio"/> Minor Modification of construction permit <input type="radio"/> Major Amendment to pending application <input type="radio"/> New Station with Petition for Rulemaking or Counterproposal to Amend FM Table of Allotments <input type="radio"/> Major Change in licensed facility <input type="radio"/> Minor Change in licensed facility <input checked="" type="radio"/> Minor Amendment to pending application (a) File number of original construction permit: BPCDT-20110509ACB <input type="checkbox"/> NA (b) Service Type: <input type="radio"/> AM <input type="radio"/> FM <input type="radio"/> TV <input checked="" type="radio"/> DTV <input type="radio"/> DTS (c) DTV Type: <input type="radio"/> Pre-Transition <input checked="" type="radio"/> Post-Transition <input type="radio"/> Both (d) Community of License: City: EL PASO (e) Facility Type: <input checked="" type="radio"/> Main <input type="radio"/> Auxiliary State: TX If an amendment, <b>submit as an Exhibit</b> a listing by [Exhibit 1] Section and Question Number the portions of the pending		



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application that are being revised.

**NOTE: In addition to the information called for in this section, an explanatory exhibit providing full particulars must be submitted for each question for which a "No" response is provided.**

## Section II - Legal

1.	<b>Certification.</b> Applicant certifies that it has answered each question in this application based on its review of the application instructions and worksheets. Applicant further certifies that where it has made an affirmative certification below, this certification constitutes its representation that the application satisfies each of the pertinent standards and criteria set forth in the application instructions and worksheets.	<input checked="" type="radio"/> Yes <input type="radio"/> No
2.	<p><b>Parties to the Application.</b></p> <p>a. List the applicant, and, if other than a natural person, its officers, directors, stockholders with attributable interests, non-insulated partners and/or members. If a corporation or partnership holds an attributable interest in the applicant, list separately its officers, directors, stockholders with attributable interests, non-insulated partners and/or members. Create a separate row for each individual or entity. Attach additional pages if necessary.</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <p>(1) Name and address of the applicant and each party to the application holding an attributable interest (if other than individual also show name, address and citizenship of natural person authorized to vote the stock or holding the attributable interest). List the applicant first, officers next, then directors and, thereafter, remaining stockholders and other entities with attributable interests, and partners.</p> </div> <div style="width: 48%;"> <p>(2) Citizenship.</p> <p>(3) Positional Interest: Officer, director, general partner, limited partner, LLC member, investor/creditor attributable under the Commission's <b>equity/debt plus</b> standard, etc.</p> <p>(4) Percentage of votes.</p> <p>(5) Percentage of total assets (equity plus debt).</p> </div> </div> <p>[Enter Parties/Owners Information]</p>	
	b. Applicant certifies that equity and financial interests not set forth above are non-attributable.	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A See Explanation in [Exhibit 2]
3.	<b>Other Authorizations.</b> List call signs, locations, and facility identifiers of all other broadcast stations in which applicant or any party to the application has an attributable interest.	<input type="checkbox"/> N/A [Exhibit 3]
4.	<b>Multiple Ownership.</b>	
	<p>a. Is the applicant or any party to the application the holder of an attributable radio joint sales agreement or an attributable radio or television time brokerage agreement in the same market as the station subject to this application?</p> <p>If "YES," radio applicants must submit as an Exhibit a copy of each such agreement for radio stations.</p>	<input type="radio"/> Yes <input checked="" type="radio"/> No [Exhibit 4]
	<p>b. Applicant certifies that the proposed facility complies with the Commission's multiple ownership rules and cross-ownership rules.</p> <p>Radio applicants only: If "Yes," submit an Exhibit providing information regarding the market, broadcast station(s), and other information necessary to demonstrate compliance with 47 C.F.R. § 73.3555(a).</p>	<input checked="" type="radio"/> Yes <input type="radio"/> No [Exhibit 5]

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	All Applicants: If "No," submit as an Exhibit a detailed explanation in support of an exemption from, or waiver of, 47 C.F.R. § 73.3555.	
c.	Applicant certifies that the proposed facility: (1) does not present an issue under the Commission's policies relating to media interests of immediate family members; (2) complies with the Commission's policies relating to future ownership interests; and (3) complies with the Commission's restrictions relating to the insulation and non-participation of non-party investors and creditors.	<input checked="" type="radio"/> Yes <input type="radio"/> No See Explanation in [Exhibit 6]
d.	Does the Applicant claim status as an "eligible entity," that is, an entity that qualifies as a small business under the Small Business Administration's size standards for its industry grouping (as set forth in 13 C.F.R. § 121-201), and holds: (1) 30 percent or more of the stock or partnership interests and more than 50 percent of the voting power of the corporation or partnership that will own the media outlet; or (2) 15 percent or more of the stock or partnership interests and more than 50 percent of the voting power of the corporation or partnership that will own the media outlet, provided that no other person or entity owns or controls more than 25 percent of the outstanding stock or partnership interests; or (3) more than 50 percent of the voting power of the corporation that will own the media outlet (if such corporation is a publicly traded company)? All applicants: If "Yes," submit as an Exhibit a detailed showing demonstrating proof of status as an eligible entity.	<input type="radio"/> Yes <input checked="" type="radio"/> No See Explanation in [Exhibit 7]
5.	<b>Character Issues.</b> Applicant certifies that neither applicant nor any party to the application has or has had any interest in or connection with: a. any broadcast application in any proceeding where character issues were left unresolved or were resolved adversely against the applicant or party to the application; or b. any pending broadcast application in which character issues have been raised.	<input checked="" type="radio"/> Yes <input type="radio"/> No See Explanation in [Exhibit 8]
6.	<b>Adverse Findings.</b> Applicant certifies that, with respect to the applicant and any party to the application, no adverse finding has been made, nor has an adverse final action been taken by any court or administrative body in a civil or criminal proceeding brought under the provisions of any law related to any of the following: any felony; mass media-related antitrust or unfair competition; fraudulent statements to another government unit; or discrimination.	<input checked="" type="radio"/> Yes <input type="radio"/> No See Explanation in [Exhibit 9]
7.	<b>Alien Ownership and Control.</b> Applicant certifies that it complies with the provisions of Section 310 of the Communications Act of 1934, as amended, relating to interests of aliens and foreign governments.	<input type="radio"/> Yes <input type="radio"/> No See Explanation in [Exhibit 10]
8.	<b>Program Service Certification.</b> Applicant certifies that it is cognizant of and will comply with its obligations as a commission licensee to present a program service responsive to the issues of public concern facing the station's community of license and service area.	<input type="radio"/> Yes <input type="radio"/> No
9.	<b>Local Public Notice.</b> Applicant certifies that it has or will comply with the public notice requirements of 47 C.F.R. Section 73.3580.	<input type="radio"/> Yes <input type="radio"/> No
10.	<b>Auction Authorization.</b> If the application is being submitted to obtain a construction permit for which the applicant was the winning bidder in an auction, then the applicant certifies, pursuant to 47 C.F.R. Section 73.5005(a), that it has attached an exhibit containing the information required by 47 C.F.R. Sections 1.2107(d), 1.2110(i), 1.2112(a) and 1.2112(b), if applicable.  <b>An exhibit is required unless this question is inapplicable.</b>	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A [Exhibit 11]
11.	<b>Anti-Drug Abuse Act Certification.</b> Applicant certifies that neither applicant nor any party to the application is subject to denial of federal benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. Section 862.	<input checked="" type="radio"/> Yes <input type="radio"/> No
12.	<b>Equal Employment Opportunity (EEO).</b> If the applicant proposes to employ five or more full-time employees, applicant certifies that it is filing simultaneously with this application a	<input type="radio"/> Yes <input type="radio"/> No

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	Model EEO Program Report on FCC Form 396-A.	<input type="radio"/> N/A
13.	<b>Petition for Rulemaking/Counterproposal to Add New FM Channel to FM Table of Allotments.</b> If the application is being submitted concurrently with a Petition for Rulemaking or Counterproposal to Amend the FM Table of Allotments (47 C.F.R. section 73.202) to add a new FM channel allotment, petitioner/counter-proponent certifies that, if the FM channel allotment requested is allotted, petitioner/counter-proponent will apply to participate in the auction of the channel allotment requested and specified in this application.	<input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> N/A

I certify that the statements in this application are true, complete, and correct to the best of my knowledge and belief, and are made in good faith. I acknowledge that all certifications and attached Exhibits are considered material representations. I hereby waive any claim to the use of any particular frequency as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and request an authorization in accordance with this application. (See Section 304 of the Communications Act of 1934, as amended.)

Typed or Printed Name of Person Signing GREG BOULANGER	Typed or Printed Title of Person Signing SECRETARY
Signature	Date

WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a)(1)), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503).

<b>SECTION III-D - DTV Engineering</b>	
<b>Complete Questions 1-5, and provide all data and information for the proposed facility, as requested in Technical Specifications, Items 1-13.</b>	
<p><b>Pre-Transition Certification Checklist:</b> An application concerning a pre-transition channel must complete questions 1(a)-(c), and 2-5. A correct answer of "Yes" to all of the questions will ensure an expeditious grant of a construction permit application to change pre-transition facilities. However, if the proposed facility is located within the Canadian or Mexican borders, coordination of the proposal under the appropriate treaties may be required prior to grant of the application. An answer of "No" will require additional evaluation of the applicable information in this form before a construction permit can be granted.</p> <p><b>Post-Transition Expedited Processing.</b> An application concerning a post-transition channel must complete questions 1(a), (d)-(e), and 2-5. A station applying for a construction permit to build its post-transition channel will receive expedited processing if its application (1) does not seek to expand the noise-limited service contour in any direction beyond that established by Appendix B of the Seventh Report and Order in MB Docket No. 87-268 establishing the new DTV Table of Allotments in 47 C.F.R. § 73.622(i) ("new DTV Table Appendix B"); (2) specifies facilities that match or closely approximate those defined in the new DTV Table Appendix B facilities; and (3) is filed within 45 days of the effective date of Section 73.616 of the rules adopted in the Report and Order in the Third DTV Periodic Review proceeding, MB Docket No. 07-91.</p>	
1. The proposed DTV facility complies with 47 C.F.R. Section 73.622 in the following respects:	
(a) It will operate on the DTV channel for this station as established in 47 C.F.R. Section 73.622.	<input type="radio"/> Yes <input checked="" type="radio"/> No
(b) It will operate a pre-transition facility from a transmitting antenna located within 5.0 km (3.1 miles) of the DTV reference site for this station as established in 47 C.F.R. Section 73.622.	<input checked="" type="radio"/> Yes <input type="radio"/> No
(c) It will operate a pre-transition facility with an effective radiated power (ERP) and antenna height above average terrain (HAAT) that do not exceed the DTV reference ERP and HAAT for this station as established in 47 C.F.R. Section 73.622.	<input checked="" type="radio"/> Yes <input type="radio"/> No
(d) It will operate at post-transition facilities that do not expand the noise-limited service contour in any direction beyond that established by Appendix B of the Seventh Report and Order in MB Docket No. 87-268 establishing the new DTV Table of Allotments in 47 C.F.R. § 73.622 (i) ("new DTV Table Appendix B").	<input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> N/A

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(e) It will operate at post-transition facilities that match or reduce by no more than five percent with respect to predicted population from those defined in the new DTV Table Appendix B.	<input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> N/A
2. The proposed facility will not have a significant environmental impact, including exposure of workers or the general public to levels of RF radiation exceeding the applicable health and safety guidelines, and therefore will not come within 47 C.F.R. Section 1.1307. Applicant must <b>submit the Exhibit</b> called for in Item 13.	<input checked="" type="radio"/> Yes <input type="radio"/> No
3. Pursuant to 47 C.F.R. Section 73.625, the DTV coverage contour of the proposed facility will encompass the allotted principal community.	<input checked="" type="radio"/> Yes <input type="radio"/> No
4. The requirements of 47 C.F.R. Section 73.1030 regarding notification to radio astronomy installations, radio receiving installations and FCC monitoring stations have either been satisfied or are not applicable.	<input checked="" type="radio"/> Yes <input type="radio"/> No
5. The antenna structure to be used by this facility has been registered by the Commission and will not require registration to support the proposed antenna, OR the FAA has previously determined that the proposed structure will not adversely effect safety in air navigation and this structure qualifies for later registration under the Commission's phased registration plan, OR the proposed installation on this structure does not require notification to the FAA pursuant to 47 C.F.R. Section 17.7.	<input checked="" type="radio"/> Yes <input type="radio"/> No

<b>SECTION III-D - DTV Engineering</b>	
<b>TECHNICAL SPECIFICATIONS</b>	
Ensure that the specifications below are accurate. Contradicting data found elsewhere in this application will be disregarded. All items must be completed. The response "on file" is not acceptable.	
<b>TECH BOX</b>	
1.	Channel Number: DTV 16 Analog TV, if any 9
2.	Zone: <input type="radio"/> I <input checked="" type="radio"/> II <input type="radio"/> III
3.	Antenna Location Coordinates: (NAD 27) Latitude: Degrees 31 Minutes 48 Seconds 19 <input checked="" type="radio"/> North <input type="radio"/> South Longitude: Degrees 106 Minutes 28 Seconds 59 <input checked="" type="radio"/> West <input type="radio"/> East
4.	Antenna Structure Registration Number: 1202400 <input type="checkbox"/> Not Applicable <input type="checkbox"/> Notification filed with FAA
5.	Antenna Location Site Elevation Above Mean Sea Level: 1708 meters
6.	Overall Tower Height Above Ground Level: 118 meters
7.	Height of Radiation Center Above Ground Level: 111 meters
8.	Height of Radiation Center Above Average Terrain : 577 meters
9.	Maximum Effective Radiated Power (average power): 463 kW
10.	Antenna Specifications: a. Manufacturer RFS Model RD24OM-1618M6T60 b. Electrical Beam Tilt: 1.25 degrees <input type="checkbox"/> Not Applicable



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c. Mechanical Beam Tilt:  
degrees toward azimuth

degrees True ☒ Not Applicable

Attach as an Exhibit all data specified in 47 C.F.R. Section 73.625(c).

[Exhibit  
45]

d. Polarization:

☒ Horizontal ☐ Circular ☐ Elliptical

e. Directional Antenna Relative Field Values: ☐ Not applicable (Nondirectional)

[For a composite directional (not off-the-shelf) antenna, press the following button to fill in the relative field values subform.]

[Relative Field Values]

### 10e. Directional Antenna Relative Field Values

[Fill in this subform for a composite directional (not off-the-shelf) antenna, only.]

e. Directional Antenna Relative Field Values:

Rotation (Degrees): 180 ☐ No Rotation

Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value
0	1	10	0.99	20	0.97	30	0.95	40	0.93	50	0.88
60	0.83	70	0.76	80	0.71	90	0.66	100	0.63	110	0.6
120	0.6	130	0.61	140	0.63	150	0.66	160	0.69	170	0.7
180	0.71	190	0.7	200	0.69	210	0.66	220	0.63	230	0.61
240	0.6	250	0.6	260	0.63	270	0.66	280	0.71	290	0.76
300	0.83	310	0.88	320	0.93	330	0.95	340	0.97	350	0.99

Additional  
Azimuths

[Relative Field Polar Plot](#)

If a directional antenna is proposed, the requirements of 47 C.F.R. Sections 73.625(c) must be satisfied. **Exhibit required.**

[Exhibit 46]

11. Does the proposed facility satisfy the pre-transition interference protection provisions of 47 C.F.R. Section 73.623(a) (Applicable only if **Certification Checklist** Items 1(a), (b), or (c) are answered "No.") and/or the post-transition interference protection provisions of 47 C.F.R. Section 73.616?

☒ Yes ☐ No

[Exhibit 47]

If "No," attach as an Exhibit justification therefor, including a summary of any related previously granted waivers.

12. If the proposed facility will not satisfy the coverage requirement of 47 C.F.R. Section 73.625, attach as an Exhibit justification therefore. (Applicable only if **Certification Checklist** item 3 is answered "No.")

[Exhibit 48]

13. **Environmental Protection Act. Submit in an Exhibit** the following:

[Exhibit 49]

If **Certification Checklist** Item 2 is answered "Yes," a brief explanation of why an

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<p>Environmental Assessment is not required. Also describe in the Exhibit the steps that will be taken to limit RF radiation exposure to the public and to persons authorized access to the tower site.</p> <p>By checking "Yes" to <b>Certification Checklist</b> Item 2, the applicant also certifies that it, in coordination with other users of the site, will reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency electromagnetic exposure in excess of FCC guidelines.</p> <p>If <b>Certification Checklist</b> Item 2 is answered "No," an Environmental Assessment as required by 47 C.F.R Section 1.1311.</p>
<p><b>PREPARERS CERTIFICATION ON SECTION III MUST BE COMPLETED AND SIGNED.</b></p>

### SECTION III - PREPARER'S CERTIFICATION

I certify that I have prepared Section III (Engineering Data) on behalf of the applicant, and that after such preparation, I have examined and found it to be accurate and true to the best of my knowledge and belief.

Name MATTHEW A. SANDERFORD, JR., P.E.		Relationship to Applicant (e.g., Consulting Engineer) CONSULTING ENGINEER	
Signature		Date 6/3/2011	
Mailing Address PO BOX 485 6100 I-35W			
City ALVARADO	State or Country (if foreign address) TX	Zip Code 76009 -0485	
Telephone Number (include area code) 8177835566	E-Mail Address (if available) TVCOWBOY@MARSAND.COM		

WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a)(1)), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503).

#### Exhibits

##### Exhibit 46

Description: ENGINEERING STATEMENT

##### Attachment 46

##### Exhibit 49

Description: (SEE ENGINEERING STATEMENT)

##### Attachment 49

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Description
<a href="#">engineering statement</a>